

What is claimed is:

1. A process for production of a water-absorbent resin, which comprises the steps of mixing a monomer liquid with a polymerization initiator and then
5 polymerizing the resultant mixture, thereby producing the water-absorbent resin;
with the process further comprising the steps of:
 - (a) continuously supplying the monomer liquid to a supply pipe line to continuously stir the monomer liquid in the supply pipe line;
 - (b) causing the polymerization initiator to join into a flow of the monomer
10 liquid being in a stirred state, thereby obtaining a mixed liquid of the monomer liquid and the polymerization initiator; and
 - (c) continuously supplying the mixed liquid from the supply pipe line to a polymerization apparatus to cause the mixed liquid to run a polymerization reaction.
- 15 2. A process for production of a water-absorbent resin according to claim 1, wherein, in the step (a), a monomer liquid having a concentration of not less than 40 weight % is used as the monomer liquid.
- 20 3. A process for production of a water-absorbent resin according to claim 1, wherein, in the step (a), a monomer liquid having a liquid temperature of not lower than 50 °C is used as the monomer liquid.
- 25 4. A process for production of a water-absorbent resin according to claim 1, wherein, in the step (a), the monomer liquid is stirred until its stirring Reynolds number reaches not smaller than 50.
5. An apparatus for production of a water-absorbent resin, which is an apparatus used for the production process as recited in claim 1;

with the apparatus comprising:

a supply pipe line to which the monomer liquid is continuously supplied;

a stirring treatment part which is placed on the way of the supply pipe line to continuously stir the monomer liquid;

5 a mixing part which is placed on the supply pipe line downstream of the stirring treatment part to supply the polymerization initiator to mix it with the monomer liquid; and

a polymerization apparatus which is placed downstream of the supply pipe line to cause a mixed liquid of the monomer liquid and the polymerization initiator to run

10 a polymerization reaction.